



## Storm Shutters Spare Charlotte County South Annex

### Full Mitigation Best Practice Story

#### *Charlotte County, Florida*



**Punta Gorda, FL** - What do you do if Hurricane Charley is about to pay an unwelcome visit in just two days and 75 percent of your office building's exterior walls are ceiling-to-floor glass windows?

If the building is the Charlotte County South Annex, which houses critical governmental, management, and administrative offices, the solution is easy. You simply put up the galvanized metal shutters that were funded in part by a grant to the State under the Hazard Mitigation Grant Program (HMGP). With the shutters in place, the Annex suffered only minimal damage. An investment of less than \$10,000 saved the taxpayers over half a million dollars in losses avoided in just one hurricane event.

"If it wasn't for the shutters," said George Dahlke, Charlotte County Facilities Construction and Maintenance Project Manager, "all the glass in the building would have been gone. Without the windows, we feel that the uplift [of the wind] would have taken the roof off."

The county's grant application was approved in 2003. Shutters were purchased for \$9,546, using a combination of local funds and the HMGP grant and installed for the first time on August 11, 2004, in anticipation of Hurricane Charley. Two days later they were severely tested when 125 mph winds slammed the coastal city.

Only one shutter was damaged. Hit hard by flying debris, it was dented, causing one pane of glass to crack. But both the shutter panel and the glass stayed in place and were not blown out. The shutter panel prevented the wind from penetrating the structure and causing major wind and water damage.

Flying debris damaged the roof, creating leaks. Water entered, damaging some of the building's contents. However, this damage was minimal in contrast to other buildings according to Charlotte County Facilities Manager, Michael Sheridan.

"The Health Department Building, without shutters, located about a mile away, is badly damaged - broken glass panels, roof and ceiling uplifted - they're still not in service [nearly five weeks later]. It may cost \$500,000 to repair," he related.

Sheridan credited the shutters on the 20,000 square foot South Annex Building with saving the county approximately \$600,000 in repairs. That is the amount that would have been needed had the glass panels been broken and the wind and water penetrated the building. The total repair estimate for the South Annex is \$80,000, with 80 percent earmarked for roof repairs due to damage from flying debris. The remainder is for damage to the contents from the roof leaks. The monetary loss avoided by installing the shutters was \$520,000.

Employees and the community also avoided losses in time-off from work and interruption of services due to lengthy repairs. Just two days post Charley, with minimal repairs still in progress, the South Annex was up and running. Employees were back at work providing much-needed services to Charlotte County residents.

The proven success of the shutter mitigation at the Charlotte County South Annex Building has spurred the Facilities Department to embark on a program to encourage continued mitigation in the entire county. "Mitigation has taken a front row seat," declared Dahlke.

### Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region IV**

State: **Florida**

County: **Charlotte County**

City/Community: **Punta Gorda**

### Key Activity/Project Information

Sector: **Public**

Hazard Type: **Hurricane/Tropical Storm**

Activity/Project Type: **Retrofitting, Non-structural**

Activity/Project Start Date: **08/2003**

Activity/Project End Date: **08/2004**

Funding Source: **Hazard Mitigation Grant Program (HMGP)**

Funding Recipient: **Business/Industry**

Funding Recipient Name: **Charlotte County South Annex**

### Activity/Project Economic Analysis

Cost: **\$9,546.00 (Actual)**

### Activity/Project Disaster Information

Mitigation Resulted From Federal  
Disaster? **Unknown**

Value Tested By Disaster? **Yes**

Tested By Federal Disaster #: **No Federal Disaster specified**

Year First Tested: **2004**

Repetitive Loss Property? **Unknown**

### Reference URLs

Reference URL 1: <http://www.fema.gov/hazards/hurricanes/nhp.shtm>

Reference URL 2: <http://www.floridadisaster.org/BRM>

## Main Points

- Used HMGP funds to purchase storm shutters
- The monetary loss avoided by installing the shutters was \$520,000.
- Employees and the community also avoided losses in time-off from work and interruption of services due to lengthy repairs. Just two days post Charley, with minimal repairs still in progress, the South Annex was up and running. Employees were back at work providing much-needed services to Charlotte County residents.